

USSR

ZABAROVSKIY, V. M., et al., Ukrainskiy Khimicheskiy Zhurnal Vol XXXVIII, No 6, 1972, pp 594-597

5,5'-positions shows that the introduction of vinyl groups into the benzene rings of the benzimidazol radicals of the imidacarbocyanin molecule causes a 15 nm shift of the absorption peak to the long wave side of the spectrum. The synthesis procedures, physical characteristics and yields are presented for 8 of the compounds.

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1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--OPERATIVE TREATMENT OF CLOSED, UNCOMPLICATED SPINE FRACTURES IN THE  
LOWER THORACIC AND LUMBAR SECTIONS -U-  
AUTHOR--(02)-ORLOVSKIY, B.F., KHODOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 6, PP 6-8

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BONE FRACTURE, ORTHOPEDIC SURGERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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STEP NO--UR/9115/70/000/006/0006/0008

CIRC ACCESSION NO--AP0129970

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0129970

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS REPORT THEIR EXPERIENCE WITH OPERATIVE TREATMENT OF UNCOMPLICATED COMPRESSION FRACTURES OF THE VERTEBRAL BODIES IN THE LOWER THORACIC AND LUMBAR SPINE AFTER THE METHOD OF J. L. TZIVIAN AND E. A. RAMIKH IN 51 PATIENTS BETWEEN THE AGES OF 20 AND 66 YEARS. THERE WERE NOT COMPLICATIONS IN THE POSTOPERATIVE PERIOD. TEMPORARY INTERNAL FIXATION OF THE DAMAGED SPINE SECTION ALLOWED TO DECREASE THE TERMS OF TREATMENT AT THE STATIONARY, ACHIEVE MAXIMUM RESOTRATION OF THE ANATOMICAL AND FUNCTIONAL DISORDERS, DIMINISH THE LOSS OF CAPACITY FOR WORK. DATA ARE PRESENTED WITH REGARD TO PREOPERATIVE PREPARATION, POSTOPERATIVE MANAGEMENT OF PATIENTS AND TERMS OF REHABILITATION. FACILITY: KLINIKI TRAVMATOLOGII, ORTOPEDII I VOYENNO-MORSKOY KHIRURGII VLADIVOSTOKSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR

UDC 621.375.82

BONCH-BRUYEVICH, A. M., KOSTIN, N. N., PRZHIBEL'SKIY, S. G., KHODOVOY, V. A.,  
KHROMOV, V. V., CHIGIR', N. A.

"Resonance Nonlinear Phenomena in Elementary Noninteracting Systems"

V sb. Nelineyn. protsessy v optike. (Nonlinear Processes in Optics--collection  
of works), Vyp. 2, Novosibirsk, 1972, pp 75-95 (from RZh-Fizika, No 12, Dec  
72, Abstract No 12D861)

Translation: A study was made of nonlinear phenomena in sets of elementary  
noninteracting systems under the effect of powerful radiation as a function  
of its spectral composition. The displacement and splitting of the D-absorp-  
tion lines of the chief doublet of the K atom in the radiation field of a  
ruby laser were investigated experimentally. Nonlinear phenomena were de-  
tected in connection with the variation of the refraction coefficients of the  
atomic vapors of Rb and K in a laser radiation field with a broad spectrum  
( $\Delta \lambda = 10$  nm) (the variation of the polarization, focusing, and defocusing of  
the radiation passing through the vapor, induced parametric scattering).  
Intense directional radiation was observed in a number of transitions of the  
Rb atom on excitation by a laser in a pigment ( $\lambda = 775-795$  nm). The phenom-  
enon of nonlinear population of the excited states of the K and Rb molecules  
with nonuniformly broadened absorption bands was detected and investigated.

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BONCH-BRUYEVICH, A. M., et al., Nelineyn. protsessy v optike. (Nonlinear Processes in Optics--collection of works), Vyp. 2, Novosibirsk, 1972, pp -- 75-95

A study was made of the saturation kinetics of the absorption in red bands of Rb molecules under the effect of ruby laser radiation. It was established that the absorption decreases uniformly along the entire band and is restored within  $2 \cdot 10^{-2}$  seconds. These phenomena are explained by dissociation and reduction of the Rb molecules. The results of all of the experiments were compared with the theoretical calculations. The bibliography has 10 entries.

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USSR

UDC 621.375.82

PRZHIBEL'SKIY, S. G., KHODOVOY, V. A.

"Shape of the Absorption Line of an Atom in the Field of Strong Interference Radiation"

V sb. Nelineyn. protsessy v optike (Nonlinear Processes in Optics--collection of works), Vyp.2, Novosibirsk, 1972, pp 148-153 (from RZh-Fizika, No 12, Dec 72, Abstract No 12D850)

Translation: A theoretical study was made of the shape of the absorption line in the basic channel of a three-level system located in a field of strong non-monochromatic radiation. The nonmonochromatic field is considered to be obtained as a result of modulation of a monochromatic signal resonant to the transition between excited states by a random noise field having gaussian statistics. The absorption line has the form of two peaks the distance between which is determined by the mean value of the field amplitude. The shape of the peak varies as a function of the noise intensity and the width of the noise spectrum; in the limiting case of a broad spectrum the shape of the line is Lorentian; and in the case of a narrow spectrum, gaussian.

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USSR

UDC 533.916

ALEKSEIN, V. F., PAVLENKO, V. P., and KHODUSOV, V. D., Institute of Physics,  
Academy of Sciences Ukrainian SSR, Kiev

"Relaxation of the Spectrum of Magnetohydrodynamic Waves in a Weakly Turbulent Plasma"

Kiev, Ukrainskiy Fizicheskiy Zhurnal, Vol 16, No 8, Aug 71, pp 1288-1292

Abstract: The authors are concerned in this article with a study of the nonlinear interaction of magnetohydrodynamic waves under conditions of weak magnetohydrodynamic turbulence. They study the processes of relaxation of magnetohydrodynamic waves wherein the basic interaction is that of bound three-plasmon processes. They further study the nonlinear interaction of waves in an unbounded plasma which is described by the equations of ideal magnetic hydrodynamics. When the relationship between the waves is weakly nonlinear, and assuming the phase oscillations to be chaotic, the authors describe the interaction of the waves in a weakly turbulent plasma by kinetic equations similar to that used for the distribution function of elementary excitations in a solid.

Employing the equations found in the first two sections, the authors apply them to studying the relaxation processes of magnetohydrodynamic waves  
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USSR

ALEKSIN, V. F., et al., Ukrainskiy Fizicheskiy Zhurnal, Vol 16, No 8, Aug 71, pp 1288-1292

by first examining the relaxation of the Alfven spectrum. Finally, the authors study the relaxation of the spectrum of fast magnetosonic waves wherein under certain conditions an equilibrium state is established due to the simultaneous excitation of the Alfven and the fast magnetosonic waves. Throughout the article the authors use equations to illustrate their findings. The article contains 14 bibliographic entries.

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USSR

AKHIEZER, A. I., ALEKSIN, V. F., and KHODUSOV, V. D., Khar'kov State University

"Concerning a New Method for the Magnetic Pumping of Energy into a Turbulent Plasma"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 3, 5 Feb 71, pp 164-166

Abstract: The new method of heating a plasma by magnetic pumping is introduced as follows: if the intensity of plasma waves ("plasmons") is sufficiently great, the interaction of the plasmons with one another may become more probable than interaction of plasmons with particles of the plasma. Under these conditions, the plasma may be considered as consisting of two weakly interacting subsystems, particles and plasmons, between which there occurs a slow exchange of energy. Relaxation in the plasma will have a two-stage character: there will first be set up quasistatic equilibria in the subsystems of particles and plasmons with different temperatures and there then will occur a slower process of temperature equalization. Particular attention is drawn here to the situation in which, if the initial energy of

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USSR

AKHIYEZER, A. I., et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 3, 5 Feb 71, pp 164-166

the plasmons is sufficiently great, one can increase the energy of the plasmons by a simple method, modulating the external parameters on which their frequencies depend. In the case of a collisionless magnetocactive plasma with hot electrons and cold ions, it is possible for three types of low-frequency, weakly damping collective oscillations to exist: Alfvén, fast, and slow magnetosonic waves. The frequencies of these waves depend on the external magnetic field, and by modulating this field one can heat the gas of Alfvén and magnetosonic waves. The energy transmitted to the plasmons in this method of heating, which can be called the magnetic pumping method, can considerably exceed the Joule heat directly obtained by the particles in magnetic pumping. Gradually the energy lost by the plasmons will transfer to the particles, and in the plasmon subsystem itself there will be established a certain stationary energy level (the level of turbulent noises). Plasma electrons will then basically be heated in a nonisothermal plasma due to the effect of Landau damping. Conditions are derived under which the proposed method of magnetic pumping can be achieved.

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1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--ESSENTUKI HEALTH RESORT TREATMENT OF PATIENTS SUFFERING FROM TOXICO  
CHEMICAL AFFECTON OF THE LIVER -U-  
AUTHOR--(05)-KENCHALOVSKAYA, N.M., VISHNEVSKIY, A.S., KHODYKIN, A.V.,  
POPOVA, T.B., VISHNEVSKAYA, YU.S.  
COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 3, PP 65-69

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIVER DISEASE, MINERAL, WATER, MUD, LIPID METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3001/0905

STEP NO--UR/0497/70/048/003/0065/0069

GIRC ACCESSION NO--AP0126564

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS INVESTIGATED THE EFFECTIVENESS OF HEALTH RESORT TREATMENT IN 64 PATIENTS SUFFERING FROM TOXIC CHEMICAL AFFECTON OF THE LIVER CAUSED BY ORGANIC COMPOUNDS. UNDER THE INFLUENCE OF A COMPLEX HEALTH RESORT TREATMENT THE PATIENTS SHOWED A FAVORABLE DYNAMICS OF SUBJECTIVE AND OBJECTIVE INDICES; SPECIAL MENTION SHOULD BE MADE OF THE FAVORABLE EFFECT OF A COMPLEX OF CARBONATE SULFUR BATHS AND FANGOTHERAPY ON THE PROTEIN FORMING, PIGMENTARY, ENZYMATIC AND FATTY LIPID FUNCTION OF THE LIVER. FACILITY: PYATIROSKOGO NAUCHNO-ISSLED. INSTITUTA KURORTOLOGII I FIZIOTERAPII, INSTITUTA GIGIYENY TRUDA I PROFZABOLEVANIY AMN SSSR, MOSKVA.

11/21/2001

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6-73

VII-6. GROWTH OF EPITAXIAL LAYERS OF GALLIUM ARSENIDE FOR THE MANUFACTURE OF GUN DIODES

[Articles by E. S. Gird, I. Ye. Maronchuk, B. N. Masenko, Yu. G. Pukhov, L. A. Khokhlov, A. M. Tolpovskiy, Svetlitskiy, Novosibirsk, III Sibirskiy na Prirodosoznanii i Sinteze, Poluprovodnikovykh Kristallov i Plazm, Russian, 12-17 June, 1972, p. 93]

The basic requirements on Gallium arsenide layers used to manufacture Gunn effect devices are formulated. The layers are grown by the gas transport in the Ga-As<sub>2</sub>-H<sub>2</sub> system, from analysis of the band widths of growth of the layers in this process and the experimental results, the conclusion is drawn that the reproducibility of the parameters of the layers affects primarily from the quality of treating the surface of the substrates and the processes in the source zone.

A number of various versions of etching the substrates in the  $\text{KNO}_3$  phase, and the recipe was selected which permits the surface to be etched with class 14 finish after saw cutting. Detailed studies were made of the process in the source zone, and the incubation time of the source was calculated on the basis of the proposed model of the formation of a thin layer of gallium arsenide on the source. A study was made of the characteristic features of obtaining the  $n$ -epitaxial structures. Epitaxial layers were obtained with  $n = 10^{14}$  to  $10^{15} \text{ cm}^{-3}$  and a mobility of  $\mu = 30,000 \text{ cm}^2/\text{Vsec}$  at  $77^\circ \text{K}$  not containing unacceptances greater than  $0.3$  microton in an area of  $3 \text{ cm}^2$ .

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USSR

UDC 535.35

ANISIMOV, S. I., IMAS, Ya. A., ROMANOV, G. S., KHODYKO, Yu. V.

"Action of High-Intensity Radiation on Metals"

Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physicomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

Abstract: The monograph presents an ordered presentation of fundamental studies on the interaction of intense radiation with matter, and ideas on the physics of the processes that stem from these studies are systematized. The most important and thoroughly investigated case of condensed substances with a high initial absorption coefficient is discussed in detail along with the range of energy flux densities that are achievable at the present time (up to  $10^{13}$  w/cm<sup>2</sup>). The presentation of several problems is based on the research of the authors themselves. 14 tables, 80 figures, 182 references.

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ANISIMOV, S. I., et al, Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physiocomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

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ANISIMOV, S. I., et al, Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physicomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

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ANISIMOV, S. I., et al, Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physicomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

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ANISIMOV, S. I., et al, Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physicomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

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ANISIMOV, S. I., et al, Deystviye izlucheniya bol'shoy moshchnosti na metally, Moscow, 1970, "Nauka" Publishing House, Main Editorial Staff for Physicomathematical Literature, 272 pp, 1 r., 04 k, 5000 copies

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USSR

RUC: 535.35

ANISIMOV, S. I., IMAS, YA. A., ROMANOV, G. S., and KHODYKO, YU. V.

"The Effect of High-Power Radiation on Metals"

Deystviye Izlucheniya Bol'shoy Moshchnosti Na Metally [English version above]  
Moscow, Nauka Press, 1970, 272 pages

Translation: This monograph presents the results of the principal works on the interaction of intensive radiation with materials and systematically develops concepts concerning the physical processes which they indicate. The most important case of condensed material with high initial absorption coefficient and the highest flux of energy achievable at the present time (up to  $10^{13} \text{ w/cm}^2$ ) is analyzed. The presentation of a number of problems is based on the investigations of the authors themselves. Fourteen tables; 80 figures; 182 biblio, refs.

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USSR

ANISIMOV, S. I., et al., Deystviye Izlucheniya Bol'shoy Moshchnosti Na Metally, 1970, 272 pages

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USSR

ANISIMOV, S. I., et al., Deystviye Izlucheniya Bol'shoy Moshchnosti Na Metally, 1970, 272 pages

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USSR

ANTISIMOV, S. I., et al., *Deystviye Izlucheniya Bol'shoy Moshchnosti Na Metally*, 1970, 272 pages

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USSR

ANISIMOV, S. I., et al., Deystviye Izlucheniya Bol'shoy Moshchnosti Na Metally,  
1970, 272 pages

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1/2 041 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--THE EFFECT OF VERY POWERFUL RADIATION ON METALS -U-  
AUTHOR--(04)--ANISIMOV, S.I., IMAS, YA.A., ROMANOV, G.S., KHODYKO, YU.V.  
COUNTRY OF INFO--USSR  
SOURCE--(DEYSTVIYE IZLUCHENIYA BOL'SHOY MOSHCHNOSTI NA METALY) MOSCOW.  
NAUKA. 1970  
DATE PUBLISHED--70  
SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY  
TOPIC TAGS--METAL, RADIATION EFFECT, SURFACE PROPERTY  
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DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--2000/0037 STEP NO--UR/0000/70/000/000/0001/0271  
CIRC ACCESSION NO--AM0123825  
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PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AM0123825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PREFACE 5. CHAPTER I  
INTRODUCTION 7. II THE EFFECT ON METALS OF RADIATION FLUX OF SMALL  
DENSITY 36. III THE DISINTEGRATION OF METALS AT MODERATE DENSITIES  
OF RADIATION FLUX. THE "THERMAL" MECHANISM OF DISINTEGRATION 71. IV  
THE HYDRODYNAMICS OF THE DISPERSION OF VAPOR AND THE ABSORPTION OF LIGHT  
BY THE DISINTEGRATION PRODUCTS 119. V THE EFFECT OF HIGH DENSITY  
RADIATION FLUX ON THE ABSORBING SUBSTANCES. THE "HYDRODYNAMIC"  
MECHANISM OF DISINTEGRATION 178. VI THE FORMATION OF HOLES AND THE  
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BASIC WORKS ON THE INTERACTION OF INTENSIVE RADIATION WITH MATTER, AND  
SYSTEMATIZES THE CONCEPTS RESULTING FROM THEM CONCERNING THE PHYSICS OF  
THE PROCESSES. EXAMINED IS THE MOST IMPORTANT CASE, INVESTIGATED IN  
DETAIL, CONCERNING CONDENSED SUBSTANCES WITH A HIGH INITIAL COEFFICIENT  
OF ABSORPTION AND AT THE PRESENT EXPERIMENTALLY ATTAINABLE RANGE OF  
DENSITIES OF THE ENERGY FLOW. (UP TO 10 PRIME13 WATT-CM PRIME2).

UNCLASSIFIED

Acc. Nr.: **AP0029818**

Ref. Code: UR 0475

PRIMARY SOURCE: Vrachebnoye Delo, ~~1970~~, Nr 1, PP 119-122

ON EXPEDIENT TERMS OF HEALTH-RESORT TREATMENT  
OF BOTKIN'S DISEASE RECONVALESCENTS

Vishnevskiy, A.S.; Khodykin, A.V.; Vishnevskaya, Yu. S.;  
Kazachok, G.I.; Pinchukova, Ye.F. (Yessentuki)

A Study of 286 Botkin's disease convalescents made in 1958--1968 indicates that complex health-resort treatment of this category of patients showed best immediate and long-term results in those convalescents who were sent to health-resorts at early terms following discharge from the hospital (from 1 to 6 months).

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19681504

1/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--EFFECT OF AGING ON SYNTHESIS OF VITAMINS IN THE RUMEN OF CALVES -U-

AUTHOR--(03)-ZHEREBTSOV, P.I., VRKIN, V.F., KHODYREV, A.A.

COUNTRY OF INFO--USSR

SOURCE--VESTN. SEL'SKOKHOZ. NAUKI (MOSCOW) 1970, 15(1), 80-7

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--VITAMIN, DAIRY CATTLE, SYNTHETIC FOOD, ORGANIC SYNTHESIS,  
BIOLOGIC AGING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3009/0172

STEP NO--UR/9091/70/015/001/0080/0087

CIRC ACCESSION NO--AP0139035

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139035

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN AN EFFORT TO REPLACE MILK IN THE NUTRITION OF YOUNG CATTLE BY A SUITABLE IMITATION FEED AN EXPTL. STUDY USING CALVES FROM 1 TO 6 MONTHS OF AGE WAS CARRIED OUT. THEIR RUMEN WAS INHABITED BY A MICROFLORA ABLE TO SYNTHESIZE THIAMINE, RIBOFLAVINE, AND VITAMIN B SUB12. THE SYNTHESIS OF VITAMIN B SUB12 WAS OBSD. IN CALVES AT THE AGE OF 1 MONTH, THAT OF RIBOFLAVINE IN THOSE AT THE AGE OF 2-3 MONTHS. THE SYNTHESIS OF THIAMINE IN THE RUMEN OF THE EXPTL. ANIMALS SET IN BEGINNING WITH THE 4TH MONTH OF AGE. FACILITY: MOSK. SEL'SKOKHOZ. AKAD. IM. TIMIRYAZEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 019  
TITLE--MACHINING OF APERTURES WITH METAL BARS -U- UNCLASSIFIED PROCESSING DATE--04DEC70  
AUTHOR--(02)-KONOVALOV, E.G., KHODYREV, V.I.  
COUNTRY OF INFO--USSR  
SOURCE--IZVEST. AKAD. NAUK BELORUSS. SSR, 1970, (FIZ.-TEKHN.), (1),  
105-106  
DATE PUBLISHED-----70  
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR  
TOPIC TAGS--CARBON STEEL, CAST IRON, CUTTING TOOL, METAL MACHINING, METAL  
REMOVAL, SURFACE ROUGHNESS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3003/0443 STEP NO--UR/0201/70/000/001/0105/0106  
CIRC ACCESSION NO--AP0129668  
UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AP0129668

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HIGH PRODUCTIVITY METHOD OF MACHINING APERTURES IN C STEEL AND CAST IRON BLOCKS AND PLATES BY MEANS OF METAL BARS (MADE OF HIGH SPEED CUTTING STEEL AND FURNISHED WITH CUTTING TEETH) IS DESCRIBED. THE BARS HAVE A DIA. A FEW MM SMALLER THAN THAT OF THE APERTURES BEING MACHINED. ONE PARTICULAR MERIT OF THIS PROCESS IS THAT THE SURFACE OF THE MACHINED PART RETAINS A HIGH DEGREE OF FINISH. THE RATE OF METAL REMOVAL IS 60 TIMES GREATER THAN THAT ACHIEVED IN CONVENTIONAL MACHINING.

UNCLASSIFIED



USSR

UDC 576.809.3

KHODYREV, V. P., Biological Institute, Siberian Division, Academy of Sciences,  
USSR

"A Method of Quantitative Calculation of Viable Spores of *Bac. thuringiensis*  
Var. *Galleriae* on Membrane Filters"

Novosibirsk, Sibirskiy Vestnik Sel'skokhozyaystvennoy Nauki, Vol 3, No 4(16),  
1973, pp 98-99

Abstract: Membrane filtration was used to determine the effect of isolation on spores of the strain, which is used in preparing insect repellents for plants. A vacuum was used to draw the suspension containing the microorganisms through the filter leaving them evenly distributed. Then nourishment was added and the number of bacteria colonies showed the original number of viable bacteria. The current study used an agar culture instead of earlier types. Results showed that better success was achieved using cultures low in nitrogen. Other innovations such as 1:10 diluted nourishing solution led to small but durable bacteria colonies. Study of the effect of the sun's rays was repeated ten times, with less than 15% variation. It was shown that sunlight with an intensity of 40,000 lux caused inactivation of the bacteria as follows: in 30 minutes, 40.7%; in 60 minutes, 62.2%, and in 120 minutes, 92.4%. It was necessary to expose both sides of the culture to obtain these results.

USSR

UDC 621.384.664

GALYAYEV, N. A., GOLOVINA, N. I., GRACHEV, M. I., GRIDASOV, V. I., GUBRIYENKO, K. I., YEREMENKO, Ye. V., ZAPOL'SKIY, V. N., ZELENOV, E. A., KOTOV, V. I., KUZNETSOV, V. S., MERKER, E. A., MYZNIKOV, K. P., PUCHUGIN, V. A., PRILEPIN, A. A., SELEZNEV, V. S., SEREBRYAKOV, B. A., KHODYREV, Yu. S., and CHEPEGIN, V. N.

"Proton Beam With an Impulse of Up to 70 GeV/s Elastically Dispersed Inside a Target"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

Abstract: This paper discusses the operation of a channel built into the French liquid-hydrogen Mirabelle chamber for the accelerator of the Institute of High-Energy Physics (IPVE). The function of the channel is to form pure beams of  $\pi$  and  $k$  mesons, and antiprotons, in a broad range of impulse magnitudes under the action of a high-frequency separator. The secondary particles are generated on the inside of a target placed in the path of a proton beam diverted from the accelerator with an energy of 70 GeV. By using a fast system for aiming the proton beam at the target, together with a kicker magnet in the channel, the required number of particles passing through the chamber can be provided. The optical system of the channel is described with the

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USSR

GALYAYEV, N. A., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

aid of diagrams of two possible variants; the beam aiming system and the particle dosage for the bubble chamber are also explained. The authors thank R. M. Sulyayev, P. F. Yermolov, A. M. Moiseyev, M. I. Solov'yev, I. A. Danil'chenko, Ye. A. Parshin, V. M. Kolesnik, A. N. Alejev, V. D. Rudko, and V. M. Gorshkov for their assistance.

2/2

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USSR

UDC 621.384.634

ALEKSANDROV, I. A., FRACHEV, M. I., GUBRIYENKO, K. I., YARMENKO, YE. V., KOTOV, V. I., NEKRASOV, A. N., PRILEPIN, A. A., PICHUGIN, V. A., RSAYEV, R. A., SAMOYLOV, A. V., SELEZNEV, V. S., SEREBRSKOV, B. A., KHANAMIRYAN, A. YE., and KHODYREV, YU. S.

"Negative Particle Channel With Momentum up to 60 Giga-electron Volts/Second"

Moscow, Atomnaya Energiya, Vol 29, No 1, Jul 70, pp 29-34

Abstract: This article contains a description of a channel for transporting negative particles generated in an internal accelerator target with momentum up to 60 giga-electron volts/second and an accelerated proton energy of 70 giga-electron volts. The channel is designed so that for an accelerated proton energy of 70 giga-electron volts it can be adjusted to momentum in the range of 40-60 giga-electron volts/second. On reducing the energy of the accelerated protons, the channel can be adjusted to lower momentum. The lower limit corresponds to an accelerated proton energy of 20 giga-electron volts and is equal to 11.4 giga-electron volts/second.

1/3 The optical system of the channel and its characteristics

USSR

ALEKSANDROV, I. A., et al., Atomnaya Energoya, Vol 29, No 1, Jul 70, pp 29-34

are presented. The limiting solid capture angle of the secondary particles by the channel is 32 microsteradians. The best resolution with respect to momentum is 0.3 percent without decreasing the capture angle. The channel was investigated primarily using a secondary beam with a momentum of  $p = 50$  gigaelectron volts/second. The procedure for adjusting the channel and the calculated data are described. The differences between the calculated operating conditions of the elements and the conditions after adjustment together do not exceed the errors of the fringing field of the accelerator, the magnetization curve, and the curve for calibrating the bypasses of the magnet. On the whole, the beam parameters agree well with the calculated data.

A detailed diagram of the channel layout is presented, and graphs are presented for the radial position of the targets and the production angle as functions of the momentum of the secondary particles, the optical system of the channel and path of the beams in the horizontal and vertical planes, the momentum

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ALEKSANDROV, I. A., et al., Atomnaya Energiya, Vol 29, No 1, Jul 70, pp 29-34

resolution of the channel, the beam profile with momentum of 50 gigaelectron volts/second in the parallel section and slit width of the aperture collimators of +20 mm and the pulse collimator +6mm, the beam profile with momentum of 50 gigaelectron volts/second in the final representation on including the lens doublet, and the beam profile with momentum of 50 gigaelectron volts/second in the final representation on including a lens triplet.

3/3

Publications

USSR

UDC 616.5-084.876

TARASENKO, N. YU., KHODYREVA, M. A., and VOROB'YEV, A. M.

Zashchita i Ochistka Kozhnykh Pokrovov ot Radioaktivnykh Zagryazneniy  
(Protection and Cleansing of the Skin from Radioactive Contaminants),  
"Meditsina", Moscow, 1972, 176 pp

Translation:

Annotation

The book deals with one of the important aspects of radiation hygiene - protection and cleansing of the skin from contamination by radioactive substances. It sets forth the hygienic and radiobiological characteristics of this type of action.

There are data on the qualitative and quantitative parameters of the levels of percutaneous resorption of some radioactive substances in the body, factors that affect the degree of resorption. General and specific methods of protecting and cleansing the skin from radioactive contamination are described.

The book contains information on the principles for differential selection of means of decontamination and evaluation of their effectiveness. It examines the basis for developing cleansing agents, methods of preparing them, and criteria for evaluating them.

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USSR

TARASENKO, N.YU., et al., Meditsina, 1972, 176 pp

The book may be highly useful in substantiating radiation safety measures to be observed by those engaged in producing radioisotopes or using them in medicine and in the economy.

The book is intended for hygienists, health officers, biologists, physicists, chemists, and industrial workers producing and using radioisotopes.

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TARASENKO, N. YU, et al., Meditsina, 1972, 176 pp

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USSR

TARASENKO, N. YU. et al., Meditsina, 1972, 176 pp

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Radioactive Contaminants from Skin...  
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USSR

UDC 551.501.8(124):551.510.52

KHODZHA-AKHMEDOV, Ch. L. and KASHURKO, M. S.

"Investigating the Relative Delay Time for Signals in Tilted Probing of the Ionosphere"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 1--collection of works) "Nauka," 1972 pp 452-455 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A344)

Translation: The concept of the coefficient of multibeam reduction,  $K_{red} = \sum_i \Delta f_i / MNCh - NNCh$ , where  $\Delta f_i$  is a band with the permissible delay signal, and MNCh and NNCh are the maximum observable frequency and least observable frequency respectively. Results are given of investigations into the dependence of  $K_{red}$  on the frequency and the distance range, and descriptions of the daily variations in  $K_{red}$  are also presented. One illustration, bibliography of two.

A. L.  
1/1

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USSR

NAGAYEV, A. V., KHODZHABAGYAN, S. S.

"Two Limiting Theorems for Non-identically Distributed Components"

Lit. mat. sb. [Lithuanian Mathematics Collection], 1972, Vol 12, No 3, pp 147-156 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V22 by V. Petrov).

Translation: Suppose  $X_1, X_2, \dots$  is a sequence of independent random quantities with zero mathematical expectations and finite dispersions  $\sigma_1^2, \sigma_2^2, \dots$ . ... If the Lindeberg condition is fulfilled and

$$P(X_j > x) = x^{-\alpha_j} (1 + \epsilon_j(x)), \quad \alpha_j > 2,$$

where the functions  $\epsilon_j(x)$  are such that  $|\epsilon_j(x)| \leq \epsilon_0(x)$  evenly relative to  $j$  and  $\epsilon_0(x) \rightarrow 0$  as  $x \rightarrow \infty$ , then

$$P(X_1 + \dots + X_n > x) \sim \sum_{j=1}^n P(X_j > x)$$

(1)

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USSR

NAGAYEV, A. V., KHODZHABAGYAN, S. S., Lit. mat. sb., 1972, Vol 12, No 3, pp 147-156.

for  $x \geq \max(n^\delta, B_n^{1+\gamma})$  and arbitrarily small positive constants  $\delta$  and  $\gamma$ ; if, however, the additional condition  $\alpha_j \geq \alpha_0 > 2$  is fulfilled, relationship (1) obtains for  $x \geq \max(n^\delta, B_n \log B_n)$ . Here  $B_n^2 = \sum_{j=1}^n \sigma_j^2$ .

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USSR

UDC 519.2

KHODZHABAGYAN, S. S.

"Local Theorem for Number of Recoveries"

Izv. AN UzSSR. Ser. fiz.-mat. n. (News of the Uzbek SSR Academy of Sciences, Physical and Mathematical Sciences Series), 1972, No 1, pp 42-45 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V17)

Translation: Let  $\xi_i$ ,  $i = 1, 2, \dots$  be a sequence of nonnegative independent random variables and

$$v_x = \max (n: \sum_{k=1}^n \xi_k < x).$$

In this paper under the assumption that the conditions

$$\inf_1 M\xi_1 = a > 0, \inf_1 D\xi_1 = \sigma^2 > 0, \sup_1 M|\xi_1 - M\xi_1|^3 < \infty$$

and certain other additional conditions are satisfied, a series of local limit theorems is proved for the probabilities  $P\{v_x = n\}$ .

1/1

USSR

UDC 519.281

KHODZHABAGYAN, S. S.

"Stability of Unbiased Estimates"

Sluchayn. Protsessy i Smezhn. Vorp. Ch. 2 [Random Processes and Related Problems, Part 2 -- Collection of Works], Tashkent, Fan Press, 1971, pp 86-92, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V224).

NO ABSTRACT.

1/1

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1/2 024  
UNCLASSIFIED  
TITLE--AUTOCOLLIMATION METHOD FOR ADJUSTING AND MONITORING AN ANTENNA WITH  
VARIABLE PROFILE -U-  
AUTHOR--(03)-KHODZHAMUKHAMMEDOV, N., STOTSKIY, A.A., BGROVIK, V.N.  
COUNTRY OF INFO--USSR  
SOURCE--RADIOTEKHNIKA I ELEKTRONIKA (RADIO AND ELECTRONICS), 1970, NO 2,  
PP 257-262  
DATE PUBLISHED-----70  
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.  
TOPIC TAGS--ANTENNA CALIBRATION, COLLIMATION/(U)PULKOVO RADIOTELESCOPE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3003/1863  
CIRC ACCESSION NO--AP0130690  
STEP NO--UR/0109/70/000/002/0257/0262  
UNCLASSIFIED



2/2 024

CIRC ACCESSION NO--AP0130690

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONSIDERED IS A NEW METHOD FOR  
ALIGNING AN ANTENNA OF VARIABLE PROFILE WITH A GROUND BASED SOURCE. THE  
EXPERIMENTAL VERIFICATION OF THE METHOD WAS MADE ON THE LARGE PULKOVO  
RADIOTELESCOPE.

UNCLASSIFIED

USSR

UDC 547.944/945

KHODZHAYEV, B. U., SHAKIROV, R., and YUNUSOV, S. YU., Red Banner of Labor  
Institute of Plant Chemistry, Uzbek Academy of Sciences  
"Alkaloids of Buxus Sempervirens"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 4, 1971, pp 542-543

Abstract: Buxus sempervirens L. (box tree), now cultivated in the USSR, contained alkaloids which have so far gone completely unstudied.

Using the chloroform method, the authors determined the alkaloid content to various organs of this tree, samples being taken from three cultivation sites.

Four substances were distinguished on the basis of chemical reactions, nuclear magnetic resonance, and mass-spectrometric and infrared data. Precise identification has not been made.

1/2 008  
UNCLASSIFIED  
TITLE--INDIVIDUAL HYDROCARBON COMPOSITION OF GASOLINE FROM KHODZHIBAD  
PETROLEUM -U-  
AUTHOR--(03)-KHODZHAYEV, G.KH., RIZAYEVA, M.K., BUROVA, YE.G.  
PROCESSING DATE--23OCT70  
COUNTRY OF INFO--USSR  
SOURCE--UZB. KHIM. ZH. 1970, 14(2), 53-5  
DATE PUBLISHED-----70  
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, PROPULSION AND FUELS  
TOPIC TAGS--CHEMICAL COMPOSITION, GASOLINE, CRUDE OIL, GEOGRAPHIC  
LOCATION, PETROLEUM DEPOSIT  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3001/2221  
STEP NO--UR/0291/70/014/002/0053/0055  
CIRC ACCESSION NO--AP0127583  
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0127583

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE GASOLINES, D PRIME20  
0.7384, CONTAINED INDIVIDUAL HYDROCARBONS AS FOLLOWS: 7 AROMATICS (5.18  
WT. PERCENT), 43 PARAFFINS (50.96PERCENT), 14 CYCLOPENTANES  
(6.72PERCENT), AND 16 CYCLOHEXANES (19.39PERCENT).

UNCLASSIFIED

USSR

UDC 621.396.6-181.48

KOPNIN, YU. I. and KHODZHAYEV, K. F.

"Generators With Nanosecond Fronts for Dynamic Studies of Integrated Circuits"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collection of Scientific Works on Problems in Microelectronics. Moscow Institute of Electronics Technology), 1972, vyp. 10, pp 182-187 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V220)

Translation: The authors study two generator circuits based on a multivibrator with a time allotting capacity in the emitter circuit and in the shaper circuit. The generators are based also on current switches for the dynamic study of high speed, digital, integrated DTL, TTL, ECL, E2SL type circuits. Resume.

USSR

UDC 534-8

VAL'KOV, Yu. V., ACHILOV, M. F., KHODZHAYEV, S. A., KHALIULIN, M. G.,  
ZABIBULLAYEV, P. K.

"Concerning the Application of Diffraction Methods to the Study of Acoustical Properties of Liquids"

Uch. zap. Tashkent. gos. ped. in-t (Scientific Notes of Tashkent State Pedagogical Institute), 1971, Vol. 90, pp 24-28 (from RZh-Fizika, No 10, Oct 72, Abstract No 10Zh608)

Translation: Using the phenomenon of Bragg diffraction of light on acoustical waves, the authors conducted experimental studies on the rate of propagation  $v$  and absorption  $\alpha$  of acoustical waves in distilled water over a wide frequency range (10-800 MHz). Acoustical waves were excited in the range 10-700 MHz using a quartz plate oscillating at odd harmonics and in the range 200-1000 MHz using a  $\text{LiNbO}_3$  crystal in a coaxial resonator. The light source was a He-Ne gas laser. The following relationships were studied:  $v = \phi(t^\circ\text{C})$  in the temperature range 10-90°C,  $v = \phi(f)$  and  $\alpha = \phi(f)$  in the frequency range 10-800 MHz at a temperature of 22°C. V. Semenov.

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USSR

KHODZHAYEV, Sh. Kh., NIYAZMETOVA, A. M.

"Algorithm for Selection of an Adequate Model of an Epidemic"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 53, Tashkent, 1972, pp 105-110 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V277, by the authors).

Translation: The epidemic process of infectious pathology is modeled using methods of regression-correlation analysis. During the course of the solution, the program which realizes the algorithm automatically screens out insignificant factors of the predetermined nonlinear mathematical model and adapts itself to the search for an adequate model.

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Diagnosis

USSR

UDC 616.935-078.734

KHODZHAYEV, SH. KH., and SOKOLOVA, I. A., Chair of Children's Diseases,  
Tashkent Institute for the Advanced Training of Physicians

"Evaluation of Opsonin-Phagocytic Reaction in the Diagnosis of Bacterial  
Dysentery"

Moscow, Sovetskaya Meditsina, No 11, 1971, pp 109-113

Abstract: Correct diagnosis of bacterial dysentery has been relatively unsuccessful (20-60% accuracy). Much work has recently been done on improving the sensitivity of bacteriological diagnosis, but a number of recognized obstacles confront this method: transience; low frequency of bacterial isolation in mild and latent forms in late hospitalization, and in early use of antibiotics; and the variability of the biochemical, serological, and morphological properties of Shigella. Now there is hope for supplementing the bacteriological methods with immunological tests, specifically, the passive hemagglutination reaction, the intracutaneous test with Tsuverskalov's dysenterin, and the opsoninphagocytic reaction (OPR). Attempts to use OPR in diagnosing bacterial dysentery have been made before, and opinion remains divided on its clinical value. A conclusive study of the value of the opsonin phagocytic test in differentiating dysentery from other intestinal disease has  
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USSR

KHODZHAYEV, SH. KH., and SOKOLOVA, I. A., Sovetskaya Meditsina, No 11, 1971, pp 109-113

been made. The test with Sh. flexner and Sh. sonnei cultures) was used dynamically in 162 patients with acute dysentery (33 had the severe form; 57 the moderate form; 72; the mild form; and 40 were classed as carriers). After establishing the phagocytic index and phagocytic number in two control groups, one healthy, the other suffering from other acute intestinal diseases, readings were taken of the phagocytic index and phagocytic number for the 162 dysentery subjects at various intervals. The OPR in the dysentery patients peaked at 3-4 days. Comparison with the base values showed the phagocytic index up by a factor of 1.5-3. This difference was statistically significant for the phagocytic index. In the recovery phase, the phagocytic index rose even higher, to 3-5 times the control group value; and the phagocytic number went up by a factor of 1.5-3. A very high phagocytic index and number were registered in 34 patients with moderate or mild forms of the disease, but the majority of these patients had had a severe case in the past. Apparently, high phagocytic activity is connected with an immunological adjustment made by the organism in the previous illness. Follow-up studies on these 162 patients revealed that a high level of phagocytic activity was maintained in the first

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USSR

KHODZHAYEV, SH. KH., and SOKOLOVA, I. A., Sovetskaya Meditsina, No 11, 1971, pp 109-113

four months of convalescence. Conventional bacteriological diagnosis was positive in only 113 subjects (69.7%). Analysis of other aspects of the OPR showed that initially weak phagocytic activity, building slowly, forecast a severe, protracted illness. Further, a high initial level of activity often promised a clinically favorable course. Thus, the OPR has a certain prognostic value. The purposes for which OPR is useful can be summarized as follows. OPR is a sensitive, supplementary tool in diagnosing bacterial dysentery, in distinguishing dysentery from other intestinal diseases, in identifying dysentery carriers, and in predicting how difficult the course of the disease is likely to be.

3/3

USSR

UDC 616.932-036.1

KEODZHAYEV, Sh. Kh., Chair of Children's Infections Tashkent Institute for Advanced Training of Physicians

"Clinical Picture of El'-Tor Cholera"

Moscow, Sovetskaya Meditsina, Vol 33, No 7, Jul 70, pp 20-24

Abstract: Clinical aspects of El'-Tor or Asiatic cholera are reviewed. The incubation period is the same as that of classic cholera: 1-6 days for most cases, the average being 2-3 days, with a maximum of 9 days in individual cases. The first symptoms may appear at any time of the day or night. The disease takes an immediate acute form in most cases, although in 25-30 percent the enteritis stage is preceded by a stage of general malaise ranging from a few hours to 1-1/2 days. In the enteric stage, the frequency of bowel movements increases to 20-30 per day. Stool consistency changes rapidly and becomes watery after the 3rd or 4th evacuation, at which time the patient becomes very weak. Painful cramps develop in the shanks and less frequently, in the arm and face muscles. Other symptoms include thirst, loss of appetite, a decrease in blood pressure, an increase in pulse rate, muscle flaccidity, inactivity, severe headache, frequent crying. Body temperature may rise to 38.2°C, cheeks are flushed, and the nose-mouth triangle is white. Daily urine output decreases. In the third, gastroenteritis stage, persistent vomiting develops. The patient becomes excitable. Temperature falls to normal or below, the skin becomes

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USSR

KHODZHAYEV, Sh. Kh, Sovetskaya Meditsina, Vol 33, No 7, Jul 70, pp 20-24

gray and is covered with viscous sweat, and wrinkles develop on the palms and soles of the feet because of decreased tissue turgor. The extremities become cold and the nose tip, lips, and ears become cyanotic. Daily urine output continues to decrease. In the fourth, algid stage, pulse rate and blood pressure can no longer be measured, heart sounds are barely audible, and the mucous membranes of the eyelids become dry. Diarrhea and vomiting usually subside, and respiration becomes rapid and shallow. In the fifth, asphyxia stage, cardiovascular and respiratory performance rapidly deteriorates. In most cases, administration of salt solutions and antibiotics drastically reduces the death rate (from an earlier 29 percent to 3.6 percent), prevents development of the later stages, alleviates existing disorders, and accelerates recovery.

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K  
USSR

KHODZHAYEV, SH. KH., and BOGUSLAVSKAYA, M. M., Chair of Children's Infections, Tashkent Institute for the Advanced Training of Physicians

"A Comparative Evaluation of the Effectiveness of Treating Brucellosis Patients with Antibiotics and with Specific Antibrucellosis Gamma-Globulin in Combination with Antibiotics"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 7-10

Abstract: Treatment of brucellosis must be improved, because administration of antibiotics gave rise to resistant Brucella strains and frequently caused toxic and allergic reactions in patients. Two groups of brucellosis patients were studied, aged 20 to 50, and exhibiting the severe, medium, and light forms of the disease. Sixty patients were treated with antibiotics only (biomycin, tetracycline, levomycetin, and streptomycin), administered according to a definite schedule. Thirty control patients, were treated with the same antibiotics, but in combination with specific antibrucellosis gamma-globulin. Although positive results were obtained with either method, the second method involving antibiotics and gamma-globulin was un-

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KHODZHAYEV, et al., Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 7-10

questionably superior. While in the first group no therapeutic effects were observed on 12 patients and 19 patients suffered relapses, in the second group positive results were observed in all patients and the number of relapses (less severe than in the first group) was three times smaller. The findings indicate that specific gamma-globulin should always be used for brucellosis treatment. If given in the early stage of the infectious process, they stimulate the body's immunological mechanisms and, in combination with antibiotics rapidly reduce the concentration of the pathogens in the body. Furthermore, since specific gamma-globulin causes little reaction, it should also be administered when brucellosis vaccine is contra-indicated.

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- 43 -

USSR

UDC: 547.944/945

KHODZHAYEV, V. G., MAYEKH, S. Kh., YUNUSOV, S. Yu., "Order of the Red Banner of Labor" Institute of the Chemistry of Plant Materials, Uzbek SSR Academy of Sciences

"Investigation of Alkaloids of *Thalictrum Longipedunculatum*. Structure of Thalicsin"

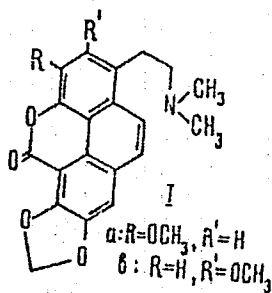
Tashkent, Khimiya Prirodnikh Soyedineniy, No 3, 1973, pp 441-442

Abstract: An attempt is made to determine the structure of thalicsin isolated from the aerial part of *Thalictrum longipedunculatum*. Elementary analysis gives the empirical formula  $C_{21}H_{19}O_6N$ , but according to the mass-spectrometrically determined molecular weight the formula should be  $C_{21}H_{19}O_5N$ . An analysis of the UV, IR, NMR and mass spectra and a comparison with the properties of thaliglucinone shows that the correct empirical formula is  $C_{21}H_{19}O_6N$  with probable structure

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USSR

KHODZHAYEV, V. G., et al., Khimiya Prirodnikh Soyedineniy, No 3, 1973,  
pp 441-442



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- 3 -



USSR

UDC 632.95

KHODZHAYEVA, F. A., GOLOVYASHKINA, L. F., and MUKHITDINOVA, N. A.

"Reaction of the Isomeric Monobromacrylic and  $\alpha, \beta$ -Dibromacrylic Acids with Aniline"

V sb. Sintez vysokomolekul. soyedin., (Collection of Works: High-Molecular Compounds), Tashkent, Fan, 1972, pp 58-62 (from Referativnyy Zhurnal -- Khimiya, Svednyy Tom, No 23(II), 1972, Abstract No 23N434 by T. A. Belyayeva)

Translation: Anilides and substituted phenyl esters of isomeric monochloracrylic acids possess a high herbicidal and fungicidal activity. In order to synthesize new pesticides with high effectiveness, the reaction of isomeric monobromacrylic and  $\alpha, \beta$ -dibromacrylic acids with aniline was studied. Physical and chemical properties of the obtained anilides of the above acids are given.

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I/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--INTERACTION OF POLYISOPRENE WITH O,MONOPERPHTHALIC ACID -U-  
AUTHOR-(03)-DOGADKIN, B.A., TUTORSKIY, I.A., KHODZHAYEVA, I.O.  
COUNTRY OF INFO--USSR  
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 315-320  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ISOPRENE, SQUALENE, NATURAL RUBBER, PHTHALIC ACID, CHEMICAL  
REACTION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1998/0190 STEP NO--UR/0069/70/032/003/0315/0320  
CIRC ACCESSION NO--AP0120888  
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120888

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF THE REACTION OF ORTHO MEONPERPHTHALIC ACID (MPPA) WITH SQUALENE AND NATURAL RUBBER HAVE BEEN STUDIED IN THE TEMPERATURE RANGE FROM NEGATIVE 25 TO 20 DEGREES AT VARYING CONCENTRATIONS AND RATIOS OF REACTANTS. THE REACTION RATE IS DESCRIBED BY A SECOND ORDER EQUATION. THE RATE CONSTANTS AND ACTIVATION ENERGY HAVE BEEN CALCULATED. THE REACTION WITH SQUALENE PROCEEDS IN TWO STEPS CORRESPONDING TO THE INTERACTION WITH THE PERACID OF TERMINAL AND INTERNAL DOUBLE BONDS. THE KINETIC CURVES FOR THE REACTION OF MPPA WITH RUBBER IN A BINARY MIXTURE CCL SUB 4 DIOXANE ARE ANOMALOUS.  
FACILITY: MOSKOVSKIY INST. TONKOY KHIMICHESKOY TEKHNologii IM. M. V. LOMONOVOVA.

UNCLASSIFIED

USSR

UDC 632.95

(2)

ZIYAYEV, A. A., OTROSHCHENKO, O. S., SADYKOV, A. S., TOLKACHEVA, G. A.,  
AKBAROV, KH. A., and KHODZHAYEVA, T. A.

"A Method of Making  $\beta$ - $\beta'$ -Di-[piperidyl-2- (or 1-Methylpiperidyl-2) ]  
Disodium- $\gamma$ ,  $\gamma'$ -Dihydrodipyrindyl Carbamate"

USSR Author's Certificate No 343975, filed 13 Jul 70, published 14 Aug  
72 (from RZh-Khimiya, No 10, May 73, Abstract No 10H614P by N. V. Lebedeva)

Translation:  $\beta$ ,  $\beta'$ -Di-(piperidyl-2)-disodium- $\gamma$ ,  $\gamma'$ -dihydrodipyrindyl  
carbamate (I) and  $\beta$ ,  $\beta'$ -di-(1-methylpiperidyl-2)-disodium- $\gamma$ ,  $\gamma'$ -  
dihydrodipyrindyl carbamate (II) are synthesized by reacting anabasine (III)  
or N-methylanabasine (IV) respectively with dispersed metallic sodium in an  
organic solvent in a molecular nitrogen atmosphere at 50-60°C. Example:  
50 g of III or IV are added to a suspension of 10 g of Na in PhMe, the reaction  
mass is agitated in a stream of  $N_2$  at 50-60°C until the sodium dissolves,  
and treated with  $CO_2$ . The resultant mass is evaporated, the residue is washed  
with n-hexane and filtered giving compound I or II with a yield of 90%, the  
melting point of I is above 400°C, molecular weight 458; the melting point of  
II is above 400°C, molecular weight 486. The values of  $R_f$  are given for I  
and II as well as IR-spectral data. I and II can be used as herbicides, and  
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USSR

ZIYAYEV, A. A., et al., USSR Author's Certificate No 343975, filed 13 Jul 70,  
published 14 Aug 72

also in synthesizing mono- and polyesters containing physiologically active  
fragments in the macromolecule.

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1/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--INTENSITY OF SERINE, ASPARTATE, AND GLUTAMATE METABOLISM IN THE  
BRAIN AND LIVER DURING VARYING PERIODS OF EXPOSURE TO GLYCINE, 2,  
AUTHOR--(02)--KHODZHAIOVA, G.K., IVANENKO, YE.F.

COUNTRY OF INFO--USSR

SOURCE--VESTN. LENINGRAD. UNIV., BIOL. 1970, (1), 114-20

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GLYCINE, CARBON ISOTOPE, RAT, CARBON DIOXIDE, RADIOACTIVE  
TRACER, BRAIN, LIVER, SERINE, GLUTAMATE, METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0242

STEP NO--UR/9074/70/000/001/0114/0120

CIRC ACCESSION NO--AP0120932

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120932

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GLYCINE PRIME14 C (30 MU CI-100 G) GIVEN S. C. TO RATS WAS RAPIDLY OXIDIZED TO CO SUB2. THE HIGHEST LEVEL OF RADIOACTIVE CO SUB2 WAS OBSD. 60 MIN AFTER THE INJECTION OF THE LABEL. LABELED GLYCINE WAS METABOLIZED IN BRAIN AND LIVER TISSUE TO SERINE, THEN TO ASPARTATE AND GLUTAMATE. THIS METABOLISM OCCURRED MUCH MORE RAPIDLY AND TO A GREATER EXTENT IN THE LIVER THAN IN THE BRAIN. IN EARLY PERIODS AFTER THE GLYCINE INJECTION, THE SP. ACTIVITIES OF ALL OF THE INVESTIGATED AMINO ACIDS IN THE LIVER WERE HIGHER THAN THOSE IN THE BRAIN, BUT THE LONGER THE PERIOD OF EXPOSURE, THE SMALLER WERE THE DIFFERENCES.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--PRESENCE OF CRITICAL MIXING TEMPERATURES DETERMINED FROM DATA ON  
THE TEMPERATURE DEPENDENCE OF THE INTRINSIC VISCOSITY OF  
AUTHOR--(04)-KHODZHEVANOVA, F.F., NAMETKIN, N.S., DURGARYAN, S.G., SEMENOV,  
O.S.  
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 283-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THERMAL EFFECT, MATERIAL MIXING, CYCLOHEXANE, SILANE,  
CHLORINATED ORGANIC COMPOUND, DEOXYRIBONUCLEIC ACID, PHOSPHATE ESTER,  
MOLECULAR STRUCTURE, FLUID VISCOSITY

CONTROL MARKING--NO RESTRICTIONS

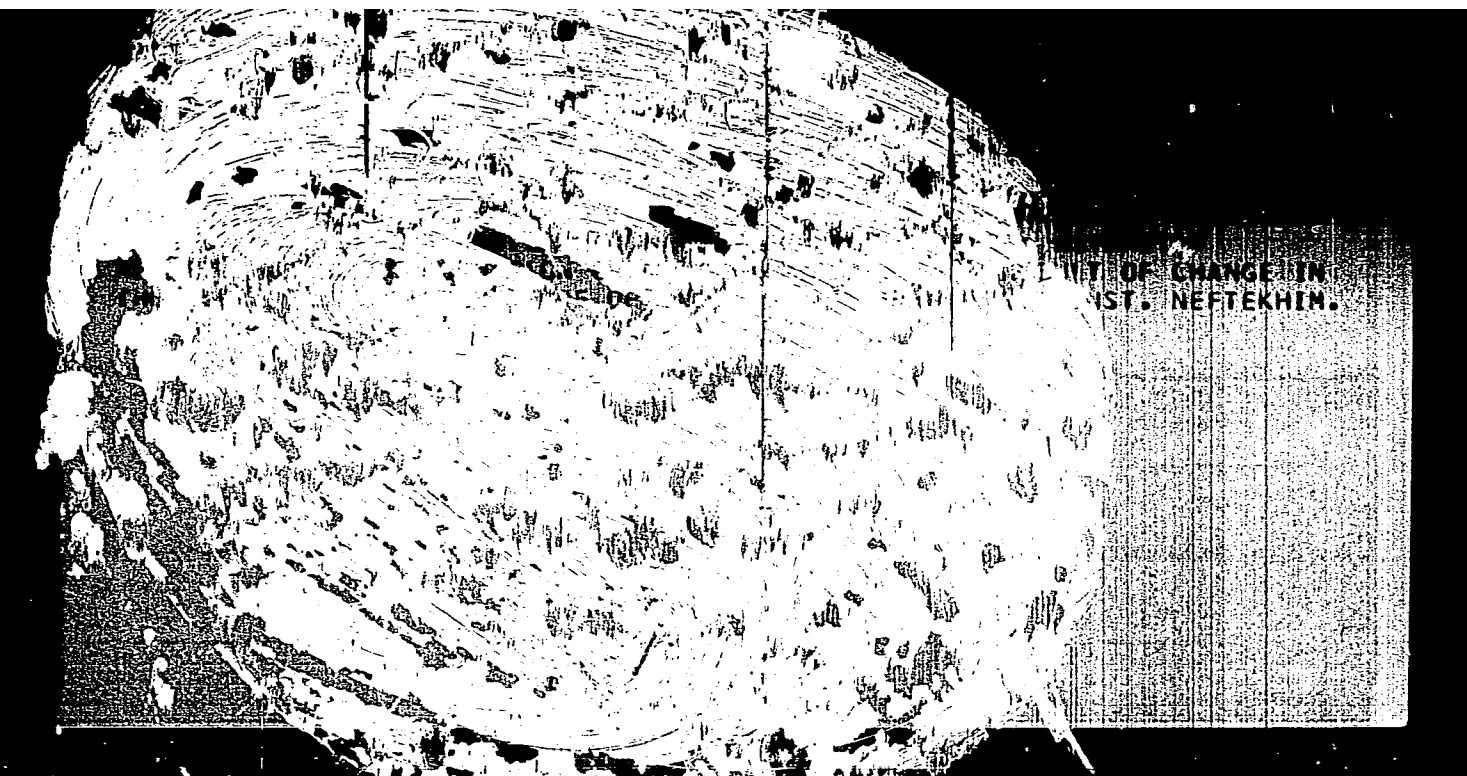
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3006/1356

STEP NO--UR/0062/70/000/002/0283/0289

CIRC ACCESSION NO--AP0135030

UNCLASSIFIED





USSR

UMC 616,932-036.1

KHODZHAYEV, Sh. Kh., Chair of Children's Infections Tashkent Institute for Advanced Training of Physicians

"Clinical Picture of El'-Tor Cholera"

Moscow, Sovetskaya Meditsina, Vol 33, No 7, Jul 70, pp 20-24

Abstract: Clinical aspects of El'-Tor or Asiatic cholera are reviewed. The incubation period is the same as that of classic cholera: 1-6 days for most cases, the average being 2-3 days, with a maximum of 9 days in individual cases. The first symptoms may appear at any time of the day or night. The disease takes an immediate acute form in most cases, although in 25-30 percent the enteritis stage is preceded by a stage of general malaise ranging from a few hours to 1-1/2 days. In the enteric stage, the frequency of bowel movements increases to 20-30 per day. Stool consistency changes rapidly and becomes watery after the 3rd or 4th evacuation, at which time the patient becomes very weak. Painful cramps develop in the shanks and less frequently, in the arm and face muscles. Other symptoms include thirst, loss of appetite, a decrease in blood pressure, an increase in pulse rate, muscle flaccidity, inactivity, severe headache, frequent crying. Body temperature may rise to 38.2°C, cheeks are flushed, and the nose-mouth triangle is white. Daily urine output decreases. In the third, gastroenteritis stage, persistent vomiting develops. The patient becomes excitable. Temperature falls to normal or below, the skin becomes 1/2

USSR

KHODZHAYEV, Sh. Kh, Sovetskaya Meditsina, Vol 33, No 7, Jul 70, pp 20-24

gray and is covered with viscous sweat, and wrinkles develop on the palms and soles of the feet because of decreased tissue turgor. The extremities become cold and the nose tip, lips, and ears become cyanotic. Daily urine output continues to decrease. In the fourth, algid stage, pulse rate and blood pressure can no longer be measured, heart sounds are barely audible, and the mucous membranes of the eyelids become dry. Diarrhea and vomiting usually subside, and respiration becomes rapid and shallow. In the fifth, asphyxia stage, cardiovascular and respiratory performance rapidly deteriorates. In most cases, administration of salt solutions and antibiotics drastically reduces the death rate (from an earlier 29 percent to 3.6 percent), prevents development of the later stages, alleviates existing disorders, and accelerates recovery.

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USSR

KHODZHAYEV, SH. KH., and BOGUSLAVSKAYA, M. M., Chair of Children's Infections, Tashkent Institute for the Advanced Training of Physicians

"A Comparative Evaluation of the Effectiveness of Treating Brucellosis Patients with Antibiotics and with Specific Antibrucellosis Gamma-Globulin in Combination with Antibiotics"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 7-10

Abstract: Treatment of brucellosis must be improved, because administration of antibiotics gave rise to resistant Brucella strains and frequently caused toxic and allergic reactions in patients. Two groups of brucellosis patients were studied, aged 20 to 50, and exhibiting the severe, medium, and light forms of the disease. Sixty patients were treated with antibiotics only (blomycin, tetracycline, levomycetin, and streptomycin), administered according to a definite schedule. Thirty control patients, were treated with the same antibiotics, but in combination with specific antibrucellosis gamma-globulin. Although positive results were obtained with either method, the second method involving antibiotics and gamma-globulin was un-  
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USSR

KHODZHAYEV, et al., Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 7-10

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USSR

UDC: 547.944/945

KHODZHAYEV, V. G., MAYEKH, S. Kh., YUNUSOV, S. Yu., "Order of the Red Banner of Labor" Institute of the Chemistry of Plant Materials, Uzbek SSR Academy of Sciences

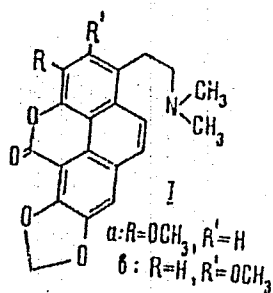
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USSR

KHODZHAYEV, V. G., et al., Khimiya Prirodnikh Soyedineniy, No 3, 1973,  
pp 441-442



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- 3 -

USSR

UDC 632.95

KHODZHAYEVA, F. A., GOLOVYASHKINA, L. F., and MUKHITDINOVA, N. A.

"Reaction of the Isomeric Monobromacrylic and  $\alpha, \beta$ -Dibromacrylic Acids with Aniline"

V sb. Sintez vysokomolekul. soyedin., (Collection of Works: High-Molecular Compounds), Tashkent, Fan, 1972, pp 58-62 (from Referativnyy Zhurnal -- Khimiya, Svochnyy Tom, No 23(II), 1972, Abstract No 23N434 by T. A. Belyayeva)

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1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--INTERACTION OF POLYISOPRENE WITH D, MONOPERPHTHALIC ACID -U-  
AUTHOR--(03)-DOGADKIN, B.A., TUTORSKIY, I.A., KHODZHAYEVA, I.D.  
COUNTRY OF INFO--USSR  
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 315-320  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ISOPRENE, SQUALENE, NATURAL RUBBER, PHTHALIC ACID, CHEMICAL REACTION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1998/0190 STEP NO--UR/0069/70/032/003/0315/0320  
CIRC ACCESSION NO--AP0120888  
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120888

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF THE REACTION OF ORTHO MEONPERPHTHALIC ACID (MPPA) WITH SQUALENE AND NATURAL RUBBER HAVE BEEN STUDIED IN THE TEMPERATURE RANGE FROM NEGATIVE 25 TO 20 DEGREES AT VARYING CONCENTRATIONS AND RATIOS OF REACTANTS. THE REACTION RATE IS DESCRIBED BY A SECOND ORDER EQUATION. THE RATE CONSTANTS AND ACTIVATION ENERGY HAVE BEEN CALCULATED. THE REACTION WITH SQUALENE PROCEEDS IN TWO STEPS CORRESPONDING TO THE INTERACTION WITH THE PERACID OF TERMINAL AND INTERNAL DOUBLE BONDS. THE KINETIC CURVES FOR THE REACTION OF MPPA WITH RUBBER IN A BINARY MIXTURE CCL SUB 4 DIOXANE ARE ANOMALOUS.  
FACILITY: MOSKOVSKIY INST. TONKOY KHIMICHESKOY TEKHNologii IM. M. V. LOMONOVOVA.

UNCLASSIFIED

USSR

UDC 632.95

(2)

ZIYAYEV, A. A., OTROSHCHENKO, O. S., SADYKOV, A. S., TOLKACHEVA, G. A.,  
AKBAROV, KH. A., and KHODZHAYEVA, T. A.

"A Method of Making  $\beta$ - $\beta'$ -Di-[piperidyl-2- (or 1-Methylpiperidyl-2) ]  
Disodium- $\gamma$ ,  $\gamma'$ -Dihydrodipyridyl Carbamate"

USSR Author's Certificate No 343975, filed 13 Jul 70, published 14 Aug  
72 (from RZh-Khimiya, No 10, May 73, Abstract No 10N614P by N. V. Lebedeva)

Translation:  $\beta$ ,  $\beta'$ -Di-(piperidyl-2)-disodium- $\gamma$ ,  $\gamma'$ -dihydrodipyridyl  
carbamate (I) and  $\beta$ ,  $\beta'$ -di-(1-methylpiperidyl-2)-disodium- $\gamma$ ,  $\gamma'$ -  
dihydrodipyridyl carbamate (II) are synthesized by reacting anabasine (III)  
or N-methylanabasine (IV) respectively with dispersed metallic sodium in an  
organic solvent in a molecular nitrogen atmosphere at 50-60°C. Example:  
50 g of III or IV are added to a suspension of 10 g of Na in PhMe, the reaction  
mass is agitated in a stream of  $H_2$  at 50-60°C until the sodium dissolves,  
and treated with  $CO_2$ . The resultant mass is evaporated, the residue is washed  
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melting point of I is above 400°C, molecular weight 458; the melting point of  
II is above 400°C, molecular weight 486. The values of  $R_f$  are given for I  
and II as well as IR-spectral data. I and II can be used as herbicides, and  
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- 32 -

USSR

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ZIYAYEV, A. A., et al., USSR Author's Certificate No 343975, filed 13 Jul 70,  
published 14 Aug 72

also in synthesizing mono- and polyesters containing physiologically active  
fragments in the macromolecule.

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1/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--INTENSITY OF SERINE, ASPARTATE, AND GLUTAMATE METABOLISM IN THE  
BRAIN AND LIVER DURING VARYING PERIODS OF EXPOSURE TO GLYCINE, 2,  
AUTHOR--(02)-KHODZHATOVA, G.K., IVANENKO, YE.F.  
COUNTRY OF INFO--USSR K  
SOURCE--VESTN. LENINGRAD. UNIV., BIOL. 1970, (1), 114-20  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--GLYCINE, CARBON ISOTOPE, RAT, CARBON DIOXIDE, RADIOACTIVE  
TRACER, BRAIN, LIVER, SERINE, GLUTAMATE, METABOLISM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1998/0242 STEP NO--UR/9074/70/000/001/0114/0120  
CIRC ACCESSION NO--AP0120932  
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120932

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GLYCINE PRIME14 C (30 MU CI-100 G) GIVEN S. C. TO RATS WAS RAPIDLY OXIDIZED TO CO SUB2. THE HIGHEST LEVEL OF RADIOACTIVE CO SUB2 WAS OBSD. 60 MIN AFTER THE INJECTION OF THE LABEL. LABELED GLYCINE WAS METABOLIZED IN BRAIN AND LIVER TISSUE TO SERINE, THEN TO ASPARTATE AND GLUTAMATE. THIS METABOLISM OCCURRED MUCH MORE RAPIDLY AND TO A GREATER EXTENT IN THE LIVER THAN IN THE BRAIN. IN EARLY PERIODS AFTER THE GLYCINE INJECTION, THE SP. ACTIVITIES OF ALL OF THE INVESTIGATED AMINO ACIDS IN THE LIVER WERE HIGHER THAN THOSE IN THE BRAIN, BUT THE LONGER THE PERIOD OF EXPOSURE, THE SMALLER WERE THE DIFFERENCES.

UNCLASSIFIED

I/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--PRESENCE OF CRITICAL MIXING TEMPERATURES DETERMINED FROM DATA ON  
THE TEMPERATURE DEPENDENCE OF THE INTRINSIC VISCOSITY OF  
AUTHOR--(04)-KHODZHEVANOV, F.F., NAMETKIN, N.S., GURGARYAN, S.G., SEMENOV,  
O.B.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 283-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--THERMAL EFFECT, MATERIAL MIXING, CYCLOHEXANE, SILANE,  
CHLORINATED ORGANIC COMPOUND, DEOXYRIBONUCLEIC ACID, PHOSPHATE ESTER,  
MOLECULAR STRUCTURE, FLUID VISCOSITY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3006/1356 STEP NO--UR/0062/70/000/002/0283/0289  
CIRC ACCESSION NO--AP0135030  
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0135030

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTRINSIC VISCOSITIES AND THEIR TEMP. COEFFS. WERE DETD. FOR POLY(VINYLTRIMETHYLSILANE) IN DECAHYDRONAPHTHALIENE, CYCLOHEXANE, 1,2,4,ME SUB3 C SUB6 H SUB3, CHCL SUB3, C SUB6 H SUB6, AND ME SUB3 SICH:CH SUB2. VISCOSITY VARIATIONS OF THE POLYMER (PREPD. WITH ETIL CATALYST) WERE INTERPRETABLE BY THE PATTERSON-TAGER THEORY ON THE BASIS OF EXISTENCE OF UPPER AND LOWER CRITICAL TEMPS. OF MIXING FOR THE POLYMER SOLVENT COMPONENTS. A SIMILAR ANAL. OF VISCOSITY IN SOLNS. OF DNA AND DEOXYRIBONUCLEOPROTEIN (DNP) WAS MADE. DNP SOLN. SHOWED AN ANOMALOUS 3 FOLD RISE IN VISCOSITY PRIOR TO CHANGE OF THE SPIRAL FORM TO THE SPHERICAL ONE, EITHER CAUSED BY DISSOCIATION OF THE PROTEIN FROM THE DNA AND INCREASED ASYMMETRY REFLECTING THE CONFORMATION CHANGE, OR PERHAPS AS A RESULT OF CHANGE IN THE SUPRAMOLECULAR STRUCTURE OF DNP. FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED



USSR/M11/RU

KHODZHIBAYEV, A. M., Chairman of the Central Committee of DOSAAB  
of the Uzbek SSR, author of article about his work.

Sovetskiy Patriot, 10 Dec 72, p 1, col 4

(1)

UDC 615.779.9:582.288

USSR

ASKAROVA, S. A., ~~KHODZHIBAYEVA, S. M.~~, and AZIMKHODZHAYEVA, M. N.,  
Department of Microbiology, Academy of Sciences Uzbek SSR

"The Effects of Polyene Antibiotics on the Production of Toxic Substances by  
Verticillium Dahliae Fungus"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, No 5, 1971, pp 60-61

Abstract: The toxin which is secreted by Verticillium dahliae fungus and which causes wilt of cotton and other plants is composed of several fractions, the most toxic one being the brown pigment. Polyene antibiotics obtained from Actinomycetes neutralize that toxin. Antibiotic 2,949 reduces the activity of the various fractions without suppressing production. Antibiotics 18-80 and 18-45 inhibit both the activity and production of all fractions. The best results are obtained with a mixture of all three antibiotics which totally inactivates the V. dahliae toxin. Cotton plants treated with the mixture develop no wilt.

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USSR

UDC 632.4.42/49A/z

KRASIL'NIKOV, N. A., KHODZHIBAYEVA, S. M., MIRCHINK, T. G., and ASKAROVA, S. A., Moscow State University

"Toxin Formation in *Verticillium dahliae* Strains Differing in Virulence"

Moscow, Sel'skokhozyaystvennaya Biologiya, No 2, 1971, pp 260-264

Abstract: Toxin was isolated from four groups of *V. dahliae* strains differing not only in morphological and biochemical properties, but also in virulence. The most virulent was group II, followed by groups III, IV, and I. The toxicity of the concentrates was tested by immersing cut cotton shoots in solutions of various dilutions. Toxin from group II wilted the plants in a 1:10,000 dilution, whereas the inhibiting effect of the other toxins was not manifested until 1:1000 and 1:100 dilutions were used. Thus, there is a relationship between the activity and virulence of the various groups of the agent of cotton wilt. *V. dahliae* toxin consists of several fractions, the most toxic being a cinnamon-brown pigment, which is produced by all four fungus groups.

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--EFFECT OF ACTH AND PITUITRIN ON TISSUE WATER SALT EQUILIBRIUM OF  
DIFFERENT RAT ORGANS -U-  
AUTHOR--KHODZHIMATOV, V.A.  
COUNTRY OF INFO--USSR  
SOURCE--UZB. BIOL. ZH. 1970, 14(2), 29-32  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--ACTH, PITUITARY HORMONE, RAT, SODIUM, POTASSIUM, LIVER, SKIN,  
KIDNEY, MUSCLE PHYSIOLOGY, SMALL INTESTINE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3002/0418 STEP NO--UR/9079/70/014/002/0029/0032  
CIRC ACCESSION NO--AP0127989

UNCLASSIFIED

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PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0127989

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACTH INCREASED THE CONTENT OF THE NA PRIME POSITIVE AND K PRIME POSITIVE AND DECREASED THE AMT. OF H SUB2 O IN THE LIVER, MUSCLES, SKIN, INTESTINE, AND KIDNEYS OF RATS. PITUITRIN DECREASED THE AMT. OF NA PRIME POSITIVE AND H SUB2 AND INCREASED THE K PRIME POSITIVE IN ALL TISSUES EXCEPT THE SKIN WHICH SHOWED AN INCREASED NA PRIME POSITIVE CONTENT.

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USSR

UDC 535.376:621.382

KHOKHLACHEV, K.I., GAVANIN, V.A., KRUGLOV, I.I., BEKHTINA, A.B.

"Pulsed Photometric Parameters Of Light-Emitting Diodes"

V sb. Impul's. fotometriya (Pulse Photometry--Collection Of Works), Issue 2, Leningrad, "Mashinostroyeniye," 1972, pp 147-152 (from RZh:Elektronika i yeye primeneniye, No 9, Sept 1972, Abstract No 9B312)

Translation: Information is furnished on native light-emitting diodes, apparatus is described, and the results are presented of a measurement of the peak value of the radiant intensity of light-emitting diodes and the stability of the peak value of the emission pulses of GaP light-emitting diodes during continuous operation. 4 ill. 2 tab. Summary.

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UDC 534.781

MOROZOV, V. P., PUOLOKAYNEN, P. A., KHOKHLOV, A. D., Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov of the USSR Academy of Sciences, Leningrad

"Infrasounds Generated by the Human Vocal Organ in the Speech and Singing Process"

Moscow, Akusticheskiy Zhurnal, Vol XVIII, No 1, 1972, pp 144-146

Abstract: A spectral analysis was made of the human voice in the infrasonic range. Both ordinary conversational speech and singing were investigated. Some example spectrometric recordings and oscillograms are presented. On the infrasonic oscillogram basically a frequency on the order of 5 hertz predominates which is well-synchronized with the vibrato frequency of the singer exhibited in the form of amplitude modulation of the sound oscillogram. The origin of infrasounds during speech processes is connected with syllabification, that is, modulation of the air flow from the lungs by the articulation apparatus. The infrasonic frequency corresponds to the mean frequency of the syllable articulation. The origin of infrasound during singing is of a different nature. When singing vowels, the singer's mouth is wide open and articulation is essentially absent; therefore, it is possible to propose that the generation of infrasound is realized by the respiratory apparatus of the singer (the diaphragm)

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MOROZOV, V. P., et al., Akusticheskiy Zhurnal, Vol XVIII, No 1, 1972, pp 144-145

and larynx. This supposition is based on the fact that during singing noticeable vibrations of the diaphragm and larynx are observed synchronized with the vibrato frequency. Thus, the origin of the vibrato of a singing voice is connected with the generation of infrasound by the vocal organ.

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1/3 024 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--CONDITIONS FOR PRODUCTION AND ISOLATION OF VALINOMYCIN, A REGULATOR  
OF CELL MEMBRANE PERMEABILITY -U-  
AUTHOR--(04)-SMIRNOVA, G.M., BLINOVA, I.N., KOLODITSKAYA, T.A., KHOKHLOV,  
A.S.  
COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 387-392

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIBIOTIC DRUG EFFECT, STREPTOMYCES, CELL MEMBRANE, FLUID  
PERMEABILITY, DRUG PRODUCTION, CONTINUOUS CULTURE, CHEMICAL  
PURIFICATION/(U)VALINOMYCIN ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1994/1362

STEP NO--UR/0297/70/015/005/0387/0392

CIRC ACCESSION NO--AP0115332

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115332

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONDITIONS FOR BIOSYNTHESIS OF VALINOMYCIN BY STREPTOMYCES SPECIES PRL 1642 UNDER PILOT PLANT CONDITIONS WERE DEVELOPED. A METHOD OF SERIAL TITRATION AGAINST CANDIDA ALBICANS WAS PROPOSED FOR DETERMINATION OF VALINOMYCIN CONTENT IN SAMPLES TAKEN DURING THE CULTURE GROWTH AND THE ANTIBIOTIC ISOLATION. SAMPLES OF THE FERMENTATION BROTH WERE ACIDIFIED WITH HYDROCHLORIC ACID TO PH 2.3-2.5, THE PRECIPITATE WAS WASHED AND EXTRACTED TWICE WITH ETHANOL, THE VOLUME OF THE EXTRACT WAS ADJUSTED WITH DISTILLED WATER TO 70 PER CENT. THE COMPOSITION OF THE FERMENTATION MEDIUM WAS THE FOLLOWING (IN PER CENT), CORN STEEP LIQUOR 0.5 (DRY WEIGHT), AMMONIUM SULFATE 0.4, GLUCOSE 1, STARCH 1.5, SODIUM CHLORIDE 0.5, CALCIUM CARBONATE 0.5. THE TIME OF FERMENTATION IN 45-, 100- AND 500-LITER FERMENTORS WAS 4 TO 5 DAYS. THE AVERAGE CONTENT OF THE ANTIBIOTIC IN 1 LITER OF THE MEDIUM WAS ABOUT 40 MG. THE ACTINOMYCETE DEVELOPMENT PROCEEDED IN 2 STAGES. THE ANTIBIOTIC PRODUCTION WAS OBSERVED IN THE 2ND STAGE, WHEN FRAGMENTATION OF THE MYCELIUM TOOK PLACE. VALINOMYCIN WAS ISOLATED BY 3-4 FOLD EXTRACTION OF THE MYCELIUM WITH ETHANOL, FOLLOWED BY PURIFICATION WITH BUTYLACETATE, SATURATED SOLUTION OF SODIUM BICARBONATE AND CARBON TETRACHLORIDE. AFTER THAT THE SUBSTANCE WAS ELUTED IN AN ALUMINA COLUMN BY CARBON TETRACHLORIDE AND THEN BY ITS MIXTURE WITH ABSOLUTE ETHANOL. ACTIVE FRACTIONS WERE EVAPORATED, DISSOLVED IN ETHER AND THE SOLUTION WAS PASSED THROUGH A COLUMN WITH ACTIVATED CHARCOAL AND CELITE 545. VALINOMYCIN WAS CRYSTALLIZED FROM HEXANE.

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PROCESSING DATE--16OCT70

CIRC. ACCESSION NO--AP0115332

ABSTRACT/EXTRACT--A COLOURLESS CRYSTALLINE SUBSTANCE WITH A MELTING POINT OF 185-186 DEGREES, ACTIVE AGAINST CANDIDA ALBICANS IN A DOSE OF 0.1 MUG-ML WAS OBTAINED.

FACILITY: INSTITUTE FOR CHEMISTRY OF NATURAL SUBSTANCES OF ACADEMY OF SCIENCES OF THE USSR, MOSCOW.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--MODIFICATION OF ANTIBIOTICS RESULTS AND PROSPECTS -U-

AUTHOR--KHOKHLOV, A.S. *K*

COUNTRY OF INFO--USSR

SOURCE--KHIM. FARM. ZH. 1970, 4(4), 29-44

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIBIOTIC, CHEMICAL STABILITY, TOXICITY, DRUG INDUSTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1991

STEP NO--UR/0450/70/004/004/0029/0044

CIRC ACCESSION NO--AP0137170

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